Subject: Re: Position calculations on start/stop scintillators
Posted by miree on Fri, 08 May 2015 09:23:15 GMT

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Ideally, the 2D histogram should look like the one in the GSI report in my earlier post.
To get these nice lined, every PMT has to work fine.
In your case something is wrong, but it is hard to tell from this single picture.
Whenever I didn't get the good looking lines, I tried to exclude signals from some PMTs (by trial and error), sometimes a single PMT can disturb all histograms.
If this doesn't help one can also start with a small number of PMTs (2 or 3) for which the correlation plots look good, and successively add more. Each time one hast to check if the histograms still look good. If they don't look good after adding the PMT #n, you know that PMT #n is not good and skip it.

Another (possibly simpler) way is to determine the correlations not using the signals from the LYCCA.CircularMembraneScintillator outputs, but by subtracting from each ToF-PMT the Sc41 time, and plot this over the distance between impact point of particle and respective PMT.
This produces correlation plots that are not so sharp (because the Sc41 time resolution is not as good as the LYCCA ToF time resolution) but allows to treat each PMT individually without any influence from other PMTs. I'll try to post a code-snippet that does it later today.